

REMARKS

In section 3 of the office action dated January 3, 2005, claims 2-9 stand rejected under 35 USC 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Applicant has amended the preamble of dependent claims 2-9 to make them consistent with the parent claim 1. Therefore, Applicant respectfully requests that this rejection be withdrawn.

Applicant has also amended the preamble of dependent claims 11-18 such that the claims are directed to a fuel injector, as set forth in independent claim 10, from which claims 11-18 depend.

In section 4 of the January 3, 2005 office action, claims 1, 4, 7, 8, 9, 19, 22, and 23 stand rejected under 35 USC 102(b) as being anticipated by Hojyo et al. (6,024,056). Applicant's independent claims have all now been amended to make it clear that the first and second mating parts are in abutting arrangement one to the other. This amendment is made merely for clarification, because an accepted dictionary definition of the word mate is "to engage with another" (Webster's Encyclopedic Unabridged Dictionary of English language). Therefore, it is clear from the original language of Applicant's specification and from the drawings that the claimed first and second mating parts abut one another. The claimed arrangement contrasts with the opposing engine block portions depicted by Hojyo, which are separated and not mated.

It doesn't matter that Hojyo teaches a single engine, as stated by the Examiner. The fact that the engine is a single unit alone has no bearing on whether its components can be understood as "mated." It is quite clear that the engine taught by Hojyo is a "V" configuration engine having separate and not mated portions distanced one from the other that must be joined across a gap between the opposed portions of the engine. Under the Examiner's proffered definition of "mating", any two components of a larger whole would be understood as mated. Such an interpretation runs counter to the above plain meaning of the word, as well as how the term "mating" has long been understood in the mechanical arts. Nevertheless, as the claim now explicitly states the previously implicit requirement that the parts abut one another, there can be no dispute that Hojyo does not teach all the limitations of the claims. Components separated by a gap simply cannot be understood as mated, much less to abut one another. Hojyo therefore does not anticipate Applicant's invention as set forth in any of the independent claims, and Applicant requests that this rejection be withdrawn.

In section 5 of the January 3, 2005 office action, claims 1, 3, 4, 7, 8, 9, 19, 21, 22, and 23 stand rejected under 35 USC 102(b) as being clearly anticipated by Pruyn (1,225,855). Applicant's independent claims have all now been amended to make it clear that the tubular seal is expanded radially in response to pressurized fluid acting inside the seal, which causes a seal to be effected between the mating parts. This positive recitation of radial expansion further distances Applicant's invention from the disclosure of Pruyn, which teaches only a sealing member which is press fit into the adjacent bores. There is no teaching in the Pruyn disclosure that the seal expands radially and, despite the Examiner's assertion, there is no indication

that it has the ability to do so. The Examiner asserts in his Response to Arguments: "If Pruyn's seal can be snug fit, it has the capability to expand radially." Pruyn was actually referring to the prior art, however, contrary the Examiner's assertion, any recitation of a "snug" fit in Pruyn actually distinguishes Pruyn from Applicant's claims. Reading the entirety of the sentence to which the Examiner refers allows a more accurate understanding of the disclosure:

The ends of the bushing extend into the tube ends to a certain extent in order to obtain a hold to prevent the parts from getting out of alinement, and it has sometimes been found, when the fit was snug to make the joint watertight, that it was difficult to drive the tube ends into place without splitting or buckling the same. (Emphasis Added)

Thus, the Examiner's apparent assertion that "snug" means capable of radial expansion, as set forth in Applicant's claims, is not accurate. If anything, Pruyn's use of the term snug means not capable of radial expansion, in contrast to Applicant's claimed design. How could Pruyn's joint otherwise be watertight? In addition, Applicant's claims require that the radial expansion of the tubular seal causes a seal to be effected between the mating parts. Even if a plausible interpretation of Pruyn were that its seal is radially expandable, which it is not, the press-fit of the cylinders over the bushing is what effects the seal, not any radial expansion thereof. Moreover, while the outer portions 5 of Pruyn are resilient, they are described as gripping the interior of the cylinders (line 83). The Examiner has pointed to no portion of the disclosure or provided any convincing line of reasoning as to how a pressurized fluid might radially expand the outer portions 5, which grip the interior of the cylinders. In particular, the described process of connecting the cylinders in Pruyn, lines 88-97, plainly requires "driving" the cylinders together. The sole conclusion that can be drawn from the Pruyn disclosure is that a seal joining two cylinders (foundation pilings) driven together will not be capable of radial expansion, nor will it be effected by pressurized fluid, as Applicant presently claims.

The amendment to claims 1, 10 and 19 emphasizes additional distinctions over the cited art. Pruyn does not teach first and second mating parts that abut one another; rather, in Pruyn the cylinders are separated by flange 3, shown in Figure 2, for example. Therefore, Pruyn does not anticipate Applicant's invention as set forth in any of the independent claims, and Applicant requests that this rejection be withdrawn.

In section 6 of the January 3, 2005 office action, claims 10, 12, 14, 15, 16, 17, and 18 stand rejected under 35 USC 103(a) as being unpatentable over Wich (4,408,718) in view of Kenny (959,546). Applicant submits and the Examiner agrees that Wich discloses a fuel injector using conventional O-ring seals to accomplish the desired sealing function. In this respect, Wich teaches away from Applicant's claimed invention and suffers the problems commonly found in the prior art. Kenny teaches a sealing device for concrete pile structures that, like Pruyn, does not disclose any ability to expand radially in response to an internal pressure. In fact, the cylinder sections are engaged via a "driving fit" to make an air and water tight joint. Similar to Pruyn, such a fit would not allow for radial expansion, and the actual

sealing is effected by driving the sections together, not by the action of fluid pressure within the seal. Without such radial expansion, the use of a tubular seal as disclosed by Pruyn, Kenny, or any of the references relied upon by the Examiner would fail to accomplish the essential purpose of Applicant's invention. Therefore, there is nothing in either Wich or Kenny that would motivate one skilled in the art to combine the two disclosures in a manner that would accomplish Applicant's claimed invention, and Applicant respectfully requests that this rejection be withdrawn.

In section 7 of the office action, claims 5 and 6 stand rejected under 35 USC 103(a) as being unpatentable over Pruyn. Claims 5 and 6 depend from allowable claim 1 and are therefore themselves allowable, and Applicant respectfully requests that this rejection be withdrawn.

In section 8 of the office action, claims 10, 13, 16, 17, and 18 stand rejected under 35 USC 103(a) as being unpatentable over Wich in view of Kohlman (5,944,319). The Examiner states that it would have been obvious to a person having ordinary skill in the art at the time of the invention to replace the o-ring of Wich with the seal of Kohlman to provide multiple and backup sealing services. Wich suffers the deficiencies both noted by the Examiner and set forth above. Kohlman teaches a sealing member that is significantly structurally different from Applicant's claimed and inventive seal. The Examiner states that "Kohlman's seal is a tube 44 that fits into first mating part 12 and second mating part 14." As is clearly evident from the drawings in Kohlman, while the seal does extend into the opposing mating parts, it does not extend into the opposing bores that must be sealed between the mating parts. It is clear from the language of Applicant's claim 10 that the sealing tube claimed by Applicant must fit into the first and second fluid bores, and not into some other or additional bore provided in the mating parts. Therefore, there is nothing in the disclosure of Kohlman to suggest combining it with the fuel injector of Wich, and Applicant respectfully requests that this rejection be withdrawn. Applicant has calculated a request for a one month extension of time is necessary in connection with this paper. A check for \$120.00 is enclosed, along with a Petition for Extension of time under 37 CFR 1.136.

Applicant believes that the instant amendments and accompanying remarks adequately distinguish Applicant's claims over the art of record, and allowance is respectfully solicited. However, if the Examiner believes that some minor additional clarification would put this application in even better condition for allowance, the Examiner is invited to contact the undersigned attorney at (812) 333-5355 in order to hasten the prosecution of this application.

Respectfully Submitted,



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